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10/594,623	05/25/2007	Masataka Minakawa	Q97476	5249

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WASHINGTON, DC 20037

EXAMINER
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KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1747

NOTIFICATION DATE	DELIVERY MODE
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10/08/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/594,623	<b>Applicant(s)</b> MINAKAWA, MASATAKA	
	<b>Examiner</b> Geoffrey L. Knable	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 5 and 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 3 as amended, no antecedent has been established for “the roller”.

The scope of claim 7 remains indefinite as it is not clear which if any of the claim 1 device features are requirements of the device of claim 7. In particular, claim 7 is directed to “a device for implementing a method for driving a carriage according to claim 1”, this preamble alone not clearly indicating whether any of the claim 1 device features are required. Claim 7, line 3 as amended then defines “an” inner and “an” outer rail, this language not referring back to the rails already defined in claim 1, this tending to indicate that the claim 1 features are not required in claim 7. Claim 7, lines 4-5 then refer to “the curved portion” but the only reference to a curved portion is in claim 1, this tending to indicate that at least some of the claim 1 device requirements are required by claim 7. Claim 1 however includes significant additional features that are not defined or referred to in claim 7 and it is entirely unclear whether they are required in claim 7. For example, claim 1 defines an “oval-shaped endless moving path” - is this required in claim 7 and if so, where it is clearly defined? Likewise, claim 1 as amended defines specifics of locking and unlocking of the carriage, etc. - are devices to effect this required by claim 7? Is a carriage required in claim 7? Clarification is required for the

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record of the scope of claim 7 in this regard, it being emphasized that the current form of the claim as being (seemingly) dependent on claim 1 is what is creating this significant confusion - the scope of this device claim would be clearer if the claim were recast as a stand-alone independent claim clearly defining what comprises the device without any reference to claim 1.

In claim 10, line 2, no antecedent has been established for "the pair of" (the reference to a "pair" was removed from claim 1).

The ambiguity in assessing the scope of claim 7 is also again amplified in claim 12 which refers to some of the features defined in claim 1 and/or claim 7 but does not indicate whether it is in reference to (and thus further defining) the same features or is introducing new features. For example, does claim 12 require rails? or devices for the locking/unlocking and engaging and disengaging as newly defined in claim 1? Clarification of the scope of this claim is therefore also required, it again being noted that it would be clearer if the claim were recast as a standalone independent claim to clearly indicate the scope thereof.

Because of these significant ambiguities in assessing the scope of claims 7 and 12, and especially given the significant amendment to claim 1 and the difficulty in assessing whether any of the devices required to provide the new claim 1 functions are required in claims 7/12, the following prior art rejections will treat claims 7 and 12 as both requiring devices to effect the new claim 1 structure and as not requiring any devices beyond what is specifically defined in the body of these claims.

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**I: Rejections if claims 7/12 are read as requiring devices necessary to practice new claim 1 features:**

3. Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)].

As to the amendments to claim 1, with the inclusion of essentially previous claim 4 within claim 1, the secondary references are applied for the same reasons as previously applied against claim 4.

4. Claims 2, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)] as applied above, and further in view of Bowman, Jr. (US 3,951,484) as applied in the last office action.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)] and Bowman, Jr. (US 3,951,484) as applied above, and further in view of and Galloway et al. (US 3,590,744) as applied in the last office action.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)] and Bowman, Jr. (US 3,951,484) as applied above, and further in view of Hajcak, Jr. (US 4,664,036) as applied in the last office action.

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7. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostling et al. (US 1,964,363) taken in view of Tegel (US 6,758,320) and Stalker (US 3,968,869).

Ostling et al. is applied for the same reasons as set forth in the last office action. With respect to the amendments to claim 1, Ostling et al. indicate that the carriage is engaged with the carrier (by lugs 26 - esp. fig. 16) but does not describe additionally locking and unlocking and engaging/disengaging at the various stations.

To additionally include carriage locking/positioning means (e.g. pins) that operate from the ground side and operate cooperatively with engaging/disengaging feed pins, would have been obvious in view of Tegel (e.g. abstract) and Stalker (e.g. col. 1, lines 6-15) which evidence it to be known and desirable to be able to accurately locate a carriage moving among workstations, this conventionally including use of pins that operate from the ground side to engage the carriage for accurate location thereof - only the expected and predictable results (especially more accurate location at the stations) would have been achieved.

8. Claims 2, 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostling et al. (US 1,964,363) taken in view of Tegel (US 6,758,320) and Stalker (US 3,968,869) as applied above, and further in view of Bowman, Jr. (US 3,951,484) as applied in the last office action.

Note also that Ostling discloses inner and outer endless rails as newly defined in claim 7. Further, by virtue of the common paths taught in the curved region in fig. 1 of

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Bowman, Jr., reciprocal chain movement at least at the curved areas would have been obvious (note that the chain and associated carrier will go back and forth).

**II: Additional rejections if claims 7/12 are read as limited to the specific devices defined in the claim body (and thus NOT requiring devices necessary to practice new claim 1 features):**

9. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) as applied above, and further in view of Bowman, Jr. (US 3,951,484).

If claim 7 does not require any additional devices related to the new claim 1 features, then Christensen and Bowman, Jr. are applied for the same reasons as set forth in the last office action. With respect to the amendments to claim 7, Christensen discloses inner and outer endless rails (22) (note endless path in fig. 1). Further, by virtue of the common paths taught in the curved region in fig. 1 of Bowman, Jr., reciprocal chain movement at least at the curves areas would have been obvious (note that the chain and associated carrier will go back and forth).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of Bowman, Jr. (US 3,951,484) as applied above, and further in view of and Galloway et al. (US 3,590,744) as applied in the last office action.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of Bowman, Jr. (US 3,951,484) as applied

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above, and further in view of Hajcak, Jr. (US 4,664,036) as applied in the last office action.

12. Claims 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostling et al. (US 1,964,363) taken in view of Bowman, Jr. (US 3,951,484) as applied in the last office action.

If claim 7 does not require any additional devices related to the new claim 1 features, then Ostling et al. and Bowman, Jr. are applied for the same reasons as set forth in the last office action. Note also that Ostling discloses inner and outer endless rails. Further, by virtue of the common paths taught in the curved region in fig. 1 of Bowman, Jr., reciprocal chain movement at least at the curved areas would have been obvious (note that the chain and associated carrier will go back and forth).

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (US 3,662,906) taken in view of Bowman, Jr. (US 3,951,484), as applied to claim 7 above, and further in view of at least one of [Tegel (US 6,758,320) and Stalker (US 3,968,869)] as applied in the last office action.

14. Applicant's arguments filed 6/28/2010 have been fully considered but they are not persuasive as regards the remaining rejections. The 112 rejections not repeated have however been withdrawn in view of applicant's response.

Applicant stresses the requirement added to claim 1. First, it should be stressed that it is not clear that claims 7-12 at present require any additional device features following the new addition to claim 1 - note especially the 112 rejections above. In any event and with respect to claim 1, it is argued that Tegel and Stalker "merely disclose



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that a carriage is in a state where the carriage is engaged with the carrier by an engagement pin, and which engagement pin is disengaged to release the carriage when the carriage arrives at a station. Neither of Tegel nor Stalker disclose or suggest the presently claimed features ...” This argument has been carefully considered but is unpersuasive. Contrary to applicant’s arguments, both Tegel and Stalker disclose locating or locking pins that operate from the ground side to engage a carriage when it arrives at a station. When so locked, the carriage is also disengaged from the carrier but the teaching of locking and unlocking for accurate location at a station is provided by both references.

Note for example the following from the Tegel abstract:

“When the pallet arrives at a station, the head of the shot pin is positively urged toward the groove in the pallet until the head locks the pallet in the desired position. Simultaneously, the feed pin disengages from the pallet. When work is completed at the manufacturing station, the head of the shot pin moves away from and releases the pallet. Simultaneously, the feed pin engages the pallet.” (Tegel; abstract)

and the following from Stalker:

“In machining numerous types of work pieces it is common practice to mount the work piece on a pallet and index the pallet supported work pieces on rails to successive machining stations. With such arrangements it is usually necessary to employ at each station a fixture for accurately locating and firmly clamping the pallet in a precise location. The locating means usually comprise at least two simultaneously shiftable pins which are adapted to be projected into locating bores in the pallet.” (Stalker, col. 1, lines 6-15).

This prior art is clearly teaching use of separate locating/locking devices to accurately locate the carriage/pallet at the respective stations, this locking/unlocking being

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coordinated with the engagement/disengagement of the carrier from the carriage. The rejections are therefore still deemed proper and will be maintained.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/  
Primary Examiner, Art Unit 1791

G. Knable  
October 1, 2010